

# 1.1 lines, increments

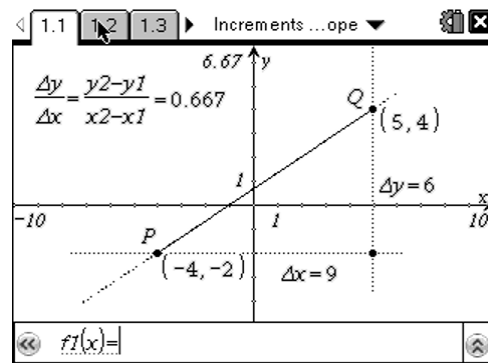
## Increments

a. How can you drag point P or Q so that only  $\Delta x$  changes?

b. How can you drag point P or Q so that only  $\Delta y$  changes?

c. What are  $\Delta x$  and  $\Delta y$ ?

d. What is the equation of the line through P and Q?



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## Definitions

Slope

Point-Slope Equation

Slope-Intercept Equation

General Linear Equation

Slopes of Parallel & Perpendicular lines

horizontal and vertical lines

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Write the point-slope equation for the line through  $(-2,-1)$  and  $(3,4)$

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Write an equation for the line through the point  $(-1,2)$  that is (a) parallel, and (b) perpendicular to the line  $L: y=3x-4$

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Find the relationship between Fahrenheit and Celsius temperature. Then find the Celsius equivalent of 90 degrees Fahrenheit and the Fahrenheit equivalent of -5 degrees Celsius

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Regression: Starting with the data in the table, build a linear model for the growth of world population. Use the model to predict the population in the year 2010.

Year	Pop
1980	4454
1985	4853
1990	5285
1995	5696
2003	6305
2004	6378
2005	6450

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